FOS Requirement Status Matrix

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
PAS-2190B					
	F-FUI-04110	passed	The FOS shall provide the capability to display 'what-if' changes on the timeline display.		0
	F-PAS-00160	passed	The FOS shall provide the capability for an authorized user to make 'what-if' changes without affecting the mission schedule for a specific spacecraft.	'What-if' changes will allow planners to study alternate mission schedules in an off-line and non-interfering mode.Capabilities like constraint checking that are available for mission schedules will be available in the 'what-if' mode.	0
	F-PAS-00165	passed	The FOS shall provide the capability for an authorized user to discard 'what-if' changes without affecting the mission schedule for a specific spacecraft.		0

FOS Requirement Status Matrix

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
	F-PAS-00170	passed	The FOS shall provide the capability for an authorized user to save 'what-if' changes to the mission schedule without affecting the mission schedule for a specific spacecraft.	These changes would be set aside and would not be incorporated. This capability would allow a planner to save a set of changes he has not finished so that he could turn off his machine.	0
	F-PAS-00175	passed	The FOS shall provide the capability for an authorized user to retrieve previously saved 'what-if' changes without affecting the mission schedule for a specific spacecraft.		0
	F-PAS-00180	passed	The FOS shall provide the capability for an authorized user to delete previously saved 'what-if' changes without affecting the mission schedule for a specific spacecraft.		0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
	F-PAS-00185	passed	The FOS shall provide the capability for an authorized user to incorporate 'what-if' changes to the mission schedule for a specific spacecraft.		0
	F-PAS-00195	passed	The FOS shall prevent a user from inputting 'what-if' requests to any portion of a mission schedule that he does not have update access for.		0
PAS-2200B					
	F-CMS-00105	passed	The EOC shall expand spacecraft and instrument activities in the DAS into lists of absolute time commands.	Activities will be expanded using expansion instructions defined in the PDB. For complex instruments, the activity expansion may be complex and involve many instrument and spacecraft commands.	0

FOS Requirement Status Matrix

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
	F-CMS-00610	passed	The EOC shall expand ground activities in the DAS into lists of time tagged ground directives.		0
	F-CMS-00615	passed	The EOC shall provide the capability to modify the expansion of a ground activity into ground directives by applying parameter values supplied as part of an activity request.		0
	F-CMS-00620	passed	The EOC shall provide the capability to check the ground directives in the ground script against ground schedule constraints.	Ground schedule constraints will be defined in the PDB.	0
	F-CMS-00625	passed	The EOC shall provide notification of ground schedule constraint violations.		0

FOS Requirement Status Matrix

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
	F-CMS-00630	passed	The EOC shall provide the capability to allow "soft" ground constraint violations to remain in the ground	The PDB will specify "hard" constraints, which cannot be violated, and "soft" constraints, which can be allowed to remain in the ground script.	0
	F-CMS-00635	passed	The EOC shall provide the capability to prohibit "hard" ground constraint violations remaining in the ground script.	The PDB will specify "hard" constraints, which cannot be violated, and "soft" constraints, which can be allowed to remain in the ground script.	0
	F-CMS-00670	passed	The EOC shall provide the capability to generate a ground script from a list of ground directives that covers the same operational period as the DAS.		0
	F-CMS-00675	passed	The EOC shall provide the capability to initiate generation of the ground script which corresponds to a DAS upon		0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			request.		
	F-CMS-01505	passed	The EOC shall provide the capability to produce an integrated report which includes the following information in chronological order: a. Absolute time commands to be executed b. Relative time commands to be executed c. Scheduled spacecraft contacts d. Real-time commands to be uplinked e. Loads to be uplinked f. Expected orbital events	The Integrated Report will be made available to the IOT via the IST.	0
	F-CMS-01610	failed	The EOC shall process all loads associated with a DAS in less than 1 hour. The processing of loads		08739

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			associated with a DAS shall include: a. Generating an ATC load based on the expanded DAS activities b. Verifying the current contents of RTS buffers referenced by the ATC load. c. Generating a ground script based on the expanded DAS activities d. Verifying the existence in the EOC table load catalog of the table loads that have uplink references in the DAS e. Verifying the existence in the EOC flight software load catalog of the flight software loads that have uplink references in the DAS f. Verifying the existence in the EOC microprocessor load catalog of the		

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			microprocessor loads that have uplink references in the DAS g. Verifying the existence in the EOC RTS load catalog of the RTS loads that have uplink references in the DAS		
	F-FUI-04090	passed	The FOS shall provide the capability to display the start and end times of the Detailed Activity Schedule on the timeline display.		0
	F-PAS-00800	passed	The FOS shall provide the capability for an authorized user to define the start and end times for the Detailed Activity Schedule.		0
	F-PAS-00805	passed	The FOS shall identify all disallowed activities that are between the start and end times for the Detailed Activity	Disallowed activities include: _activities that are scheduled in windows; _resource reservation	0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			Schedule.	request activities that are place holders for detailed activities; _and activities that cause constraint violations.	
	F-PAS-00810	passed	The FOS shall provide the capability for an authorized user to remove disallowed activities from the Detailed Activity Schedule.	This is intended to give the FOT the ability to avoid mistakes with an automated check.	0
	F-PAS-00815	failed	The FOS shall provide the capability for an authorized user to specify the users who can create a Detailed Activity Schedule.		08021,08022
	F-PAS-00835	passed	The FOS shall ensure that activities in the Detailed Activity Schedule are within predefined resource limits .		0
	F-PAS-00840	passed	The FOS shall ensure that no activities		0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			cause hard constraint violations in the Detailed Activity Schedule.		
	F-PAS-01035	passed	The FOS shall be able to release a Detailed Activity Schedule (DAS) containing 1000 activities in less than 10 minutes. The process of releasing a DAS includes: a. Generate a schedule boundary that defines the DAS b. Identify activities in the DAS that violate hard and soft constraints c. Change the protections on activities in the DAS to restrict schedule modifications to TOOs and Late Changes		0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
POST-B					
	F-ANA-01070	unverified	The FOS shall be able to access EDOS Status Messages for analysis.	Functionality to be delivered post-Release B.	0
	F-ANA-01080	unverified	The FOS shall be able to access EOSDIS Ground Station RF Terminal Status Messages for analysis.	Functionality to be delivered post-Release B	0
	F-ANA-04140	unverified	The FOS shall provide the capability to generate datasets from EDOS Status Messages.	Functionality to be delivered post-Release B.	0
	F-ANA-04150	unverified	The FOS shall provide the capability to generate datasets from EOSDIS Ground Station RF terminal Status Messages.	Functionality to be delivered post-Release B.	0

FOS Requirement Status Matrix

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
	F-ANA-07500	unverified	The FOS shall compute and store the UTC for each data outage which was a result of an EDOS failure.	The EDOS failure is determined by evaluating the contents of the EDOS Status Message which is received from EDOS approximately every 5 seconds. Functionality to be delivered post-Release B.	0
	F-ANA-07510	unverified	The FOS shall provide compute and store the total elapsed time for each data outage which was a result of an EDOS failure.	Functionality to be delivered post-Release B.	0
	F-ANA-07520	unverified	The FOS shall provide compute and store the total time for all data outages within each real time contact resulting from EDOS failures.	Functionality to be delivered post-Release B.	0
	F-ANA-07530	unverified	The FOS shall compute and store the UTC for each data outage which was	The EOSDIS Ground Station RF Terminal failure is determined by	0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			a result of an EOSDIS Ground Station RF Terminal failure.	evaluating the contents of the EOSDIS Ground Station RF Terminal Status Message which is received from the EOSDIS Ground Station Management Facility. During a spacecraft contact, only the data from the active ground station is evaluated. Functionality to be delivered post-Release B.	
	F-ANA-07540	unverified	The FOS shall compute and store the elapsed time for each data outage which was a result of an EOSDIS Ground Station RF Terminal failure.	Functionality to be delivered post-Release B.	0
	F-ANA-07550	unverified	The FOS shall compute and store the total time for all data outages within each real time contact resulting from EOSDIS Ground Station RF Terminal failures.	Functionality to be delivered post-Release B.	0

FOS Requirement Status Matrix

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
	F-ANA-09010	unverified	The EOC shall define an EASE to contain up to 15 comparisons of the following type, all resulting in a value of TRUE or FALSE: a. Spacecraft or ground telemetry value (Greater Than, Less Than, Greater Than or Equal To, Less Than or Equal To, Equal To, Not Equal To) Constant. Example. BattVolt1 > 20.0 b. Spacecraft or ground telemetry value (Greater Than, Less Than, Greater Than or Equal To, Less Than or Equal To, Equal To, Not Equal To) spacecraft or ground telemetry value. Example. BattVolt1 > BattVolt2 c. The return value of a function taking a ground or spacecraft telemetry value as an argument (Greater Than,		0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			Less Than, Equal Greater Than or Equal To, Less Than or Equal To, To, Not Equal To) Constant. Example. AverageDelta Value (BattVolt1) == 0.0		
			d. The value of another EASE (Equal To) TRUE/FALSE. Example. BatteryEASE == TRUE		
	F-ANA-09020	unverified	The EOC shall compute the value of the EASE by operating on the TRUE/FALSE results of each comparison contained within the EASE, using AND or OR boolean operators. Examples: (Batt1Volts > 20.0) AND (Battery1EASE == FALSE)_(Batt1Volts>Batt2Volts) OR		0

FOS Requirement Status Matrix

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			(Batt2Volts>Batt3Volts)		
	F-ANA-09030	unverified	The EOC shall evaluate the boolean AND/OR operators in order, unless parentheses are included to indicate order of operation.		0
	F-ANA-09040	unverified	The EOC shall provide the capability to define an EASE.		0
	F-ANA-09050	unverified	The EOC shall provide the capability to delete an EASE.		0
	F-ANA-09060	unverified	The EOC shall provide the capability to edit an EASE.		0

FOS Requirement Status Matrix

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
	F-CMD-01140	unverified	The EOC shall be capable of transmitting commands to the EOS spacecraft using the EOSDIS ground stations.	The EDOS forward link processor will reside at the EOSDIS ground station and therefore will require separate addressing from the EDOS facility at White Sands. Functionality to be delivered post-Release B.	0
	F-DMS-00950	unverified	The EOC shall provide the capability to archive event messages received from EDOS.	Functionality to be delivered post-Release B.	0
	F-DMS-00960	unverified	The EOC shall provide the capabiliy to retrieve archived EDOS event messages.	Functionality to be delivered post-Release B.	0
	F-DMS-01022	unverified	The EOC shall be capable of retrieving	This requirement will be implemented	0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			the following data files from the FOS archive. a. View period information for EOSDIS Ground Stations. b. EOSDIS Ground Station Acquisition data. c. Spacecraft contact	post-Release B.	
	F-DMS-01110	unverified	The EOC shall provide the capability to send archived data to a designated SDPS.		0
	F-DMS-01120	unverified	The EOC shall accept storage status, indicating the success or failure of the storage of the archived data, from the SDPS.		0
	F-DMS-01130	unverified	The EOC shall maintain the archived data until the SDPS has notified the		0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			EOC of successful storage.		
	F-DMS-01140	unverified	The EOC shall provide the capability to retrieve FOS archive data from the SDPS.		0
	F-DMS-01285	unverified	The FOS shall provide the capability to receive event messages from EDOS.	Functionality to be delivered post-Release B.	0
	F-DMS-01295	unverified	The FOS shall provide the capability to designate a type of event message as an EDOS event message.	Functionality to be delivered post-Release B	0
	F-DMS-01410	unverified	The EOC shall provide the capability to send spacecraft contact schedules to EDOS.		0

FOS Requirement Status Matrix

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
	F-DMS-01430	unverified	The EOC shall provide the capability to append an EDOS header to files transmitted to EDOS.		0
	F-DMS-01435	unverified	The FOS shall allow the operator to configure the EOC to set and unset the test flag in files sent to EDOS.		0
	F-DMS-01460	unverified	The EOC shall provide the capability to send files to the EOSDIS Ground Stations.	The EOC will provide Spacecraft contact schedules and FDF-generated acquisition data to the EOSDIS Ground Stations. Functionality to be delivered post-Release B.	0
	F-FOS-00017	unverified	The EOC shall use and support the EOSDIS Ground Stations, via the	Functionality to be delivered post-Release B	0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			EDOS/Ebnet interface, to obtain routine forward link (S-band) and return link (S-band and X-band) support.		
	F-FOS-00321	unverified	The EOC shall use EBnet for data communications with EOSDIS Ground Stations.	This requirement will be implemented in post-Release B.	0
	F-FOS-00327	unverified	The EOC shall receive acquisition data from the FDF for EOSDIS Ground Stations.	This requirement will be implemented in post-Release B.	0
	F-FOS-00345	unverified	The EOC shall receive status data from EDOS.	Reference the Interface Control Document between the EDOS and EGS Elements for specifics pertaining to this interface.	0

FOS Requirement Status Matrix

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
	F-FOS-00550	unverified	FOS critical real time processes shall be able to recover to normal operations within 1 minute of a Data Server failover.	.	0
	F-FOS-00560	unverified	FOS off-line processes that reside on the Data Server shall checkpoint non-recoverable data to the RAID.		0
	F-FOS-10240	unverified	The FOs shall provide an IST software toolkit to the U.S. JPL ASTER Science Team SCF.	This IST will have limited (read-only) capabilities.	0
	F-FOS-10245	unverified	The FOS shall provide a single IST connection to the U.S. JPL ASTER Science Team SCF.	The U.S. ASTER Science Team SCF is designated as a "read only" site.	0

FOS Requirement Status Matrix

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
	F-FUI-02926	unverified	The FOS shall provide a routine report template for a data outage report.	This requirement will be implemented post-Release B. This is related to EOSDIS Ground Station and EDOS status messages.	0
	F-FUI-07311	unverified	The FOS shall allow the user to plot data from different times and/or different data sources on a three dimensional graph.	This requirement will be implemented Post Release B.	0
	F-PAS-00155	unverified	The FOS shall provide FDF orbit data to the ECS SDPS.	DMS has responsibility for this requirement.	0
	F-PAS-00860	unverified	The EOC shall generate a Detailed Activity Schedule file for archival at the ECS SDPS.		0
	F-PAS-00930	unverified	The FOS shall be able to model a		0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			nominal spacecraft attitude.		
	F-PAS-00935	unverified	The FOS shall be able to model spacecraft attitude offsets.		0
	F-PAS-10440	unverified	The EOC shall provide the capability to schedule EOSDIS Ground Stations communication for routine S-band and X-band contacts.	This requirement will be implemented post-Relase B	0
	F-PAS-10441	unverified	The EOC shall provide the capability to receive EOSDIS Ground Stations' view periods from the FDF.	This requirement will be implememented post-Release B. DMS has responsibility for this requirement.	0
	F-PAS-10442	unverified	The EOC shall provide the capability to receive availability schedules from the	This requirement will be implemented post-Release B. DMS has	0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			EOSDIS Ground Stations.	responsibility for this requirement.	
	F-PAS-10610	unverified	The FOS shall define and display on the timeline an orbital event when the CERES Solar elevation angle value (provided by FDD) is -11 degrees. (This allows the instrument operations team to accurately schedule CERES solar calibrations.)		0
	F-PAS-10620	unverified	The FOS shall define and display on the timeline orbital events when the CERES Solar elevation angle (provided by FDD) enters and exits a range of values defined by CERES,.		0
	F-PAS-10630	unverified	The FOS shall define and display on the timeline orbital events when the		0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			value (provided by FDD) dips below a value provided by CERES.		
	F-RMS-00010	unverified	The EOC shall support concurrent real-time operations for up to seven (7) spacecraft and their instruments.		0
	F-TLM-02217	unverified	The EOC shall be capable of receiving and processing EDOS Status messages.	High level status information will be provided by EDOS on a periodic basis, nominally every 5 secounds. This requirement will be implemented post-Release B.	0
	F-TLM-02218	unverified	The EOC shall be capable of of receiving and processing EOSDIS Ground Station Status messages.	High level status information will be provided by EOSDIS Ground Stations on a periodic basis, nominally every 5 seconds. This requirement will be implemented post-Release B.	0

FOS Requirement Status Matrix

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
	F-TLM-02280	unverified	The FOS shall be capable of replaying stored EDOS Status messages based upon a user specified time period.	This requirement will be implemented post-Release B.	0
	F-TLM-02281	unverified	The FOS shall be capable of replaying stored EOSDIS Ground Station Status messages based upon a user specified time period.	This requirement will be implemented post-Release B.	0
	F-TLM-02285	unverified	The FOS shall process all stored EDOS Status messages for the requested period, during the replay operation.	This requirement will be implemented post-Release B.	0
	F-TLM-02286	unverified	The FOS shall process all stored EOSDIS Ground Station Status messages for the requested period, during the replay operation.	This requirement will be implemented post-Release B.	0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
	F-TLM-02290	unverified	The FOS shall be capable of processing stored EDOS Status messages for analysis at twelve (12) times the real-time rate.	This requirement is derived from the fact that the FOS must be able to analyze twenty-four (24) hours of stored telemetry data within two (2) hours. This capability is used for off-line batch processing and when the immediate display of information is not necessary or desired (i.e. gathering statistics on a particular parameter over several weeks of stored telemetry data). This requirement will be implemented post-Release B.	0
	F-TLM-02291	unverified	The FOS shall be capable of processing EOSDIS Ground Station Status messages for analysis at twelve (12) times the real-time rate.	This requirement is derived from the fact that the FOS must be able to analyze twenty-four (24) hours of stored telemetry data within two (2)	0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
				hours. This capability is used for off-line batch processing and when the immediate display of information is not necessary or desired (i.e. gathering statistics on a particular parameter over several weeks of stored telemetry data). This requirement will be implemented post-Release B.	
	F-TLM-02295	unverified	The FOS shall be capable of processing stored EDOS Status messages for display at rates up to three (3) times the real-time rate.	This requirement permits the rapid replay and display of stored data and may be useful during contact simulations. This requirement will be implemented post-Release B.	0
	F-TLM-02296	unverified	The FOS shall be capable of processing stored EOSDIS Ground Station Status messages for display at	This requirement permits the rapid replay and display of stored data and may be useful during contact	0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			rates up to three (3) times real-time rate.	simulations. This requirement will be implemented post-Release B	
	F-TLM-02298	unverified	The FOS shall be able to replay and process the EDOS Status messages at the real-time or at a user-specified rate.	This requirement will be implemented post-Release B.	0
	F-TLM-02299	unverified	The FOS shall be able to replay and process the EOSDIS Ground Station Status messages at the real-time or at a user specified rate.	This requirement will be implemented post-Release B. Refer to F-TLM-02296 for "user-specified rate". This requirement will be implemented post-Release B.	0
SAS-2000B					
	F-FOS-00308	passed	The FOS shall provide the capability for an EOC operator to remotely login to the Spacecraft Simulator to access simulator displays.		0

FOS Requirement Status Matrix

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
	F-FOS-00322	passed	The FOS shall provide the capability for an EOS operator to remotely login to an Flight Dynamics Division (FDD) workstation to access FDD real time attitude determination (RTAD) displays.		0
	F-FOS-10305	passed	The FOS shall provide the capability for an EOC operator to remotely login to the AM1 Spacecraft Analysis System (SAS) to access analysis displays.		0
SYS-2000B					
	F-FOS-00070	passed	The EOC shall manage initialization and shutdown of EOC functions.		0
	F-FOS-00490	passed	The EOC shall provide for security		0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			safeguards to cover unscheduled system shutdown (aborts) and subsequent restarts, as well as for scheduled system shutdown and operational startup.		
	F-FOS-00570	passed	The FOS Data Server shall startup and initialize within 5 minutes.		0
SYS-2020B					
	F-FOS-00035	passed	The EOC shall provide a test mode of operation that does not interfere with ongoing operations, and which supports independent FOS and subsystem tests, end-to-end tests, and integration and verification activities occurring during at a minimum: a. Spacecraft and instrument		0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			integration and test b. Pre-launch c. Upgrades and enhancements		
	F-FUI-07720	partially passed	The FOS shall provide one status window for each logical string connection.		08509
	F-FUI-08100	passed	The FOS shall provide a user the capability to submit a resource service request.	A resource service request will contain the parameters needed by the Resource Management Subsystem to establish a logical string. These parameters include: _a. spacecraft Id _b. data base Id _c. service type (real-time, replay, simulation)	0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
				_d. mode (operational, training, test)	
	F-RMS-00020	passed	The EOC shall be capable of accepting default ground system information at system startup.	Default ground system information will include default logical strings to be created at system initialization time.	0
	F-RMS-00030	passed	The EOC shall be capable of accepting EOC operator requests to configure the EOC.	Configure refers to the allocation of EOC hardware and software components for a specific use within a logical string.	0
	F-RMS-00040	passed	The EOC shall allow EOC operators to identify EOC resources for operational mode.	Identifying a logical string for operation, test or training mode will not constrain the use of that logical string. This identification merely serves notice to all potential users of the intended use for a given string.	0
	F-RMS-00050	passed	The EOC shall allow EOC operators to	Identifying a logical string for operation,	0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			identify EOC resources for test mode.	test or training mode will not constrain the use of that logical string. This identification merely serves notice to all potential users of the intended use for a given string.	
	F-RMS-00060	passed	The EOC shall allow EOC operators to identify EOC resources for training mode.	Identifying a logical string for operation, test or training mode will not constrain the use of that logical string. This identification merely serves notice to all potential users of the intended use for a given string.	0
	F-RMS-01060	passed	The EOC shall provide the capability to authorize an EOC operator to modify the ground system configuration.		0
	F-RMS-01070	passed	The EOC shall allow only one	Ground configuration authority is	0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			authorized EOC operator, at any given time, the privilege to modify the ground system configuration.	granted on a per logical string basis.	
SYS-2030B					
	F-DMS-01270	failed	The FOS shall provide the capability to generate events upon receipt of hardware component status change information from the MSS.		07606
	F-DMS-01280	failed	The FOS shall provide the capability to generate events upon receipt of permanent and temporary software component status change information from the MSS.		07606
	F-FOS-00098	passed	The EOC shall provide the capabilities: a. To test both nominal operations and		0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			failure paths b. To log test activities and test configuration c. To support analysis of test data and the generation of test results d. To maintain test procedures and test		
	F-FOS-00490	passed	The EOC shall provide for security safeguards to cover unscheduled system shutdown (aborts) and subsequent restarts, as well as for scheduled system shutdown and operational startup.		0
	F-FOS-00510	partially passed	The EOC shall have no single point of failure for functions associated with real-time operations of the spacecraft and instruments.		08628

FOS Requirement Status Matrix

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
	F-FUI-08105	passed	The FOS shall provide a user the capability to display ground system equipment status.		0
	F-FUI-08110	passed	The FOS shall provide a user the capability to display ground system parameter values.		0
	F-FUI-08115	partially passed	The FOS shall provide a user the capability to display user workstation configuration data.	The workstation configuration display will show the connections between each active workstation and the established ground system configurations.	08627
	F-RMS-02010	partially passed	The EOC shall process an EOC operator request to initiate the transfer of spacecraft control from one set of hardware and software components		08628

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			to another in order to work around a fault or anomaly.		
	F-RMS-02020	partially passed	The EOC shall correct a failure condition with a redundant component within one minute of operator request.	The RMS design goal is to restore normal operations within 30 seconds.	08628
	F-RMS-03010	partially passed	The EOC shall monitor EOC hardware components for changes in status.	The status monitored tells the EOC that the component is active or inactive. The monitor function will be provided by MSS tools that will be employed by the FOS software. Statuses will be reported to the DMS subsystem in the form of management events.	08628
	F-RMS-03030	partially passed	The EOC shall monitor software components for change in status.	The status of the software tasks monitored could be active, inactive, or	08628

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
				suspended. The monitor function will be provided by MSS tools that will be employed by the FOS software. Statuses will be reported to the DMS subsystem in the form of management events.	
	F-RMS-03040	passed	The EOC shall maintain changes to the ground configuration and hardware and software component statuses.		0
	F-RMS-03050	passed	The EOC shall make ground configuration and component statuses available for display to the EOC operators.		0
	F-RMS-03070	passed	The EOC shall notify the operator of changes in the ground configuration		0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			and component statuses.		
	F-RMS-03080	passed	The EOC shall log changes in the ground configuration and component statuses.		0
	F-RMS-03090	failed	The EOC shall provide the MSS with changes in EOC component statuses.		08623
	F-RMS-03240	failed	The EOC shall make performance monitoring and fault management information obtained from the MSS available to the EOC operator.		07606
TLM-2000B					
	F-FOS-00020	passed	The EOC shall use and support the EDOS/EBnet interface to obtain the		0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			data formatting services, data distribution services, and data quality and accounting services needed to achieve full FOS functionality.		
	F-FOS-00320	passed	The EOC shall use Ebnet for data communications for the following types of data: a. Real-time telemetry data, rate-buffered telemetry data b. Command data c. TDRSS schedule requests and TDRSS schedules d. Data exchange with the FDF, NCC and EDOS	Reference the Interface Control Document between the EOC and Ebnet for specifics pertaining to this interface.	
	F-FUI-07330	passed	The FOS shall have the capability to capture all occurrences of a parameter between screen updates, and then		0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			display the captured data at the next update.		
	F-FUI-07425	passed	The FOS shall provide the user with the capability to capture all occurrences of a telemetry value between screen updates, and then display the captured data at the next screen update.		0
	F-FUI-17200	partially passed	The FOS shall be capable of displaying master/major cycle count.		04760
	F-FUI-17700	passed	The FOS shall display current master/major cycle count.		0
	F-RMS-00070	passed	The EOC shall provide an EOC operator		0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			access to real-time data.		
	F-RMS-00090	passed	The EOC shall provide an EOC operator access to simulated data.		0
	F-TLM-00115	passed	The EOC shall be capable of receiving EOS spacecraft simulator telemetry.	The spacecraft simulator data may originate at the spacecraft contractor facility, spacecraft software development facility, or EOC.	0
	F-TLM-00135	passed	The EOC shall be capable of receiving telemetry in either EDU or CCSDS packet format.	The EOC is required to directly accept and process archived instrument engineering telemetry in CCSDS packet form. Spacecraft and instrument housekeeping telemetry CCSDS packets will be received encapsulated	0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
				within EDUs.	
	F-TLM-00210	passed	The EOC shall accept EDOS Data Units (EDUs) containing spacecraft and instrument telemetry data.		0
	F-TLM-00215	passed	The EOC shall extract the EDU Service Header (ESH) containing data quality, accounting, and EDOS ground receipt date and time information from the EDU.		0
	F-TLM-00220	passed	The EOC shall extract the Service Data Unit (SDU) containing a CCSDS Version-1 spacecraft or instrument telemetry packet from the EDU.		0
	F-TLM-00410	passed	The FOS shall accept a CCSDS Version-1 format telemetry packet of a	The packets to be processed are defined within the Project Data Base	0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			predefined type and length.	and are organized by APID.	
	F-TLM-00440	passed	The FOS shall extract from the telemetry packet primary header field the following: a. The 11-bit packet APID. b. The 14-bit packet sequence count. c. The two (2) octet packet length count.	The FOS will examine the CCSDS packet sequence count located within the primary header to determine a proper packet sequence and to detect missing packets.	0
	F-TLM-00450	passed	The FOS shall be capable of extracting from the telemetry packet application data field the following: a. An optional CCSDS packet secondary header field b. The packet application process telemetry information.	CCSDS defines the packet secondary header as being an optional data field within each CCSDS packet. However, it is envisioned that this field will be used throughout the EOS missions and will contain an eight (8) octet packet time stamp. The application process telemetry information contains the	0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
				telemetered spacecraft and instrument sample point values.	
	F-TLM-00490	passed	The FOS shall provide the capability to convert the packet time stamp according to a specified spacecraft time code conversion algorithm.	Examples of time codes are CCSDS Unsegmented Time Code and CCSDS Day Segmented Time Code. AM-1 uses CCSDS Day Segmented Time Code and does not require spacecraft time fly wheeling. Spacecraft time flywheel is not required for AM-1, but may be necessary for future missions. (Reference "Time Code Formats", Blue Book, CCSDS 301.0-B-2.)	0
	F-TLM-00610	passed	The FOS shall initially mark all defined telemetry parameters as being static and as having no data available.	A static indicator is associated with each parameter and is accessible for display or other processing.	0

FOS Requirement Status Matrix

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
	F-TLM-00635	passed	The FOS shall mark a parameter as being active when it has been successfully decommutated.		0
	F-TLM-01410	passed	The FOS shall make available the values for every predefined telemetry parameter.		0
	F-TLM-01430	passed	The FOS shall initialize/baseline all decommutated and converted value areas when no telemetry data is available.	For example, this would occur during pre-contact system configuration when telemetry data is yet to be	0
	F-TLM-10410	passed	The FOS shall accept AM-1 CCSDS format telemetry packets of a predefined type and length.	The FOS will support both pure CCSDS packet telemetry and Time Division Multiplexed (TDM) type telemetry transferred within the CCSDS packets,	0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
				such as that implemented for AM-1.	
	F-TLM-10420	passed	The FOS shall accept AM-1 1664 octet diagnostic telemetry packets.		0
	F-TLM-10425	passed	The FOS shall accept AM-1 208 octet health and safety telemetry packets.		0
	F-TLM-10430	passed	The FOS shall accept AM-1 208 octet diagnostic telemetry packets.		0
	F-TLM-10435	passed	The FOS shall accept AM-1 208 octet standby CTIU telemetry packets.		0

FOS Requirement Status Matrix

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
	F-TLM-10440	passed	The FOS shall extract from the telemetry packet primary header field the following: a. The 11-bit packet APID. b. The 14-bit packet sequence count. c. The two (2) octet packet length count.	The FOS will examine the AM-1 CCSDS packet sequence count located within the primary header to determine a proper major cycle sequence and to detect missing cycles.	0
	F-TLM-10465	passed	The FOS shall be capable of extracting the 193 octet telemetry information from the 1 Kbps AM-1 health and safety packet application data field.		0
	F-TLM-10470	passed	The FOS shall be capable of extracting the 193 octet telemetry information from the 1 Kbps AM-1 diagnostic packet application data field.		0

FOS Requirement Status Matrix

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
	F-TLM-10475	passed	The FOS shall be capable of extracting the 193 octet telemetry information from the 1 Kbps AM-1 standby CTIU packet application data field.		0
	F-TLM-10490	passed	The FOS shall provide the capability to convert the packet time stamp according to the CCSDS Day Segmented Time Code time conversion algorithm.		0
	F-TLM-10525	passed	The FOS shall determine the decommutation algorithm for a telemetered AM-1 CCSDS packet based upon the packet application process identifier (APID) and packet sequence count fields.		0
	F-TLM-10550	unverified	The FOS shall be capable of		08039

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			decommutating real-time spacecraft diagnostic telemetry at a rate of 16 Kbps.		
	F-TLM-10555	unverified	The FOS shall be capable of decommutating real-time instrument diagnostic telemetry at a rate of 16 Kbps.		08039
	F-TLM-10560	passed	The FOS shall be capable of continuously decommutating real-time spacecraft health and safety telemetry at a rate of 1 Kbps.		0
	F-TLM-10570	passed	The FOS shall be capable of decommutating real-time spacecraft diagnostic telemetry at a rate of 1 Kbps.		0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
	F-TLM-10575	passed	The FOS shall be capable of decommutating real-time instrument diagnostic telemetry at a rate of 1 Kbps.		0
	F-TLM-10580	passed	The FOS shall be capable of decommutating real-time spacecraft standby CTIU telemetry at a rate of 1 Kbps.		0
TLM-2010B					
	F-FOS-00020	passed	The EOC shall use and support the EDOS/EBnet interface to obtain the data formatting services, data distribution services, and data quality and accounting services needed to achieve full FOS functionality.		0

FOS Requirement Status Matrix

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
	F-FOS-00320	passed	The EOC shall use Ebnet for data communications for the following types of data: a. Real-time telemetry data, rate-buffered telemetry data b. Command data c. TDRSS schedule requests and TDRSS schedules d. Data exchange with the FDF, NCC and EDOS	Reference the Interface Control Document between the EOC and Ebnet for specifics pertaining to this interface.	
	F-FOS-00350	passed	The EOC shall receive telemetry data from EDOS, including real-time and rate-buffered housekeeping and engineering data from EOS instruments and spacecraft.	Reference the Interface Control Document between the EOC and EDOS for specifics pertaining to this interface.	0
	F-FUI-07330	passed	The FOS shall have the capability to capture all occurrences of a parameter		0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			between screen updates, and then display the captured data at the next update.		
	F-FUI-07425	passed	The FOS shall provide the user with the capability to capture all occurrences of a telemetry value between screen updates, and then display the captured data at the next screen update.		0
	F-TLM-00110	passed	The EOC shall be capable of receiving EOS spacecraft and instrument telemetry.	The spacecraft data may originate at the spacecraft contractor facility, spacecraft launch facility, or EDOS.	0
	F-TLM-00115	passed	The EOC shall be capable of receiving EOS spacecraft simulator telemetry.	The spacecraft simulator data may originate at the spacecraft contractor facility, spacecraft software	0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
				development facility, or EOC.	
	F-TLM-00135	passed	The EOC shall be capable of receiving telemetry in either EDU or CCSDS packet format.	The EOC is required to directly accept and process archived instrument engineering telemetry in CCSDS packet form. Spacecraft and instrument housekeeping telemetry CCSDS packets will be received encapsulated within EDUs.	0
	F-TLM-00210	passed	The EOC shall accept EDOS Data Units (EDUs) containing spacecraft and instrument telemetry data.		0
	F-TLM-00215	passed	The EOC shall extract the EDU Service Header (ESH) containing data quality, accounting, and EDOS ground receipt date and time information from the EDU.		0

FOS Requirement Status Matrix

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
	F-TLM-00220	passed	The EOC shall extract the Service Data Unit (SDU) containing a CCSDS Version-1 spacecraft or instrument telemetry packet from the EDU.		0
	F-TLM-00410	passed	The FOS shall accept a CCSDS Version-1 format telemetry packet of a predefined type and length.	The packets to be processed are defined within the Project Data Base and are organized by APID.	0
	F-TLM-00440	passed	The FOS shall extract from the telemetry packet primary header field the following: a. The 11-bit packet APID. b. The 14-bit packet sequence count. c. The two (2) octet packet length count.	The FOS will examine the CCSDS packet sequence count located within the primary header to determine a proper packet sequence and to detect missing packets.	0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
	F-TLM-00450	passed	The FOS shall be capable of extracting from the telemetry packet application data field the following: a. An optional CCSDS packet secondary header field b. The packet application process telemetry information.	CCSDS defines the packet secondary header as being an optional data field within each CCSDS packet. However, it is envisioned that this field will be used throughout the EOS missions and will contain an eight (8) octet packet time stamp. The application process telemetry information contains the telemetered spacecraft and instrument sample point values.	0
	F-TLM-00490	passed	The FOS shall provide the capability to convert the packet time stamp according to a specified spacecraft time code conversion algorithm.	Examples of time codes are CCSDS Unsegmented Time Code and CCSDS Day Segmented Time Code. AM-1 uses CCSDS Day Segmented Time Code and does not require spacecraft time fly wheeling. Spacecraft time flywheel is not required for AM-1, but may be necessary for future missions.	0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
				(Reference "Time Code Formats", Blue Book, CCSDS 301.0-B-2.)	
	F-TLM-00510	passed	The FOS shall support the decommutation of spacecraft housekeeping telemetry for the EOS spacecraft.		0
	F-TLM-00515	passed	The FOS shall support the decommutation of instrument housekeeping telemetry for the EOS instruments.		0
	F-TLM-00525	passed	The FOS shall determine the decommutation algorithm for a telemetered CCSDS packet application data field based upon the packet application process identifier (APID).	The FOS supports the processing of engineering data for engineering telemetry downlinked with its own CCSDS packet application identifier.	0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
	F-TLM-00530	passed	The FOS shall decommutate telemetry based upon predefined spacecraft and instrument specific decommutation information.	The decommutation information will consist of data necessary for the retrieval and storage of downlinked spacecraft telemetry parameters. This decommutation information will be based on the Project Data Base.	0
	F-TLM-01430	passed	The FOS shall initialize/baseline all decommutated and converted value areas when no telemetry data is available.	For example, this would occur during pre-contact system configuration when telemetry data is yet to be	0
	F-TLM-10415	passed	The FOS shall accept AM-1 1664 octet housekeeping telemetry packets.		0
	F-TLM-10440	passed	The FOS shall extract from the telemetry packet primary header field the following:	The FOS will examine the AM-1 CCSDS packet sequence count located within the primary header to determine a	0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			a. The 11-bit packet APID. b. The 14-bit packet sequence count. c. The two (2) octet packet length count.	proper major cycle sequence and to detect missing cycles.	
	F-TLM-10455	passed	The FOS shall be capable of extracting the 1649 octet telemetry information from the 16 Kbps AM-1 housekeeping packet application data field.		0
	F-TLM-10460	passed	The FOS shall be capable of extracting the 1649 octet telemetry information from the 16 Kbps AM-1 diagnostic packet application data field .		0
	F-TLM-10490	passed	The FOS shall provide the capability to convert the packet time stamp according to the CCSDS Day Segmented Time Code time conversion		0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			algorithm.		
	F-TLM-10525	passed	The FOS shall determine the decommutation algorithm for a telemetered AM-1 CCSDS packet based upon the packet application process identifier (APID) and packet sequence count fields.		0
	F-TLM-10535	passed	The FOS shall be capable of continuously decommutating real-time spacecraft housekeeping telemetry at a rate of 16 Kbps.		0
	F-TLM-10540	passed	The FOS shall be capable of continuously decommutating real-time instrument housekeeping telemetry at a rate of 16 Kbps.		0

FOS Requirement Status Matrix

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
TLM-2020B					
	F-DMS-10110	unverified	The FOS shall provide the capability to exclude processing of duplicate CERES data.	This requirement will be handled by context dependent definitions.	08783
	F-RMS-00070	unverified	The EOC shall provide an EOC operator access to real-time data.		08783
	F-RMS-00130	unverified	The EOC shall provide an IST operator access to real-time data.		08783
	F-TLM-00610	unverified	The FOS shall initially mark all defined telemetry parameters as being static and as having no data available.	A static indicator is associated with each parameter and is accessible for display or other processing.	08783

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
	F-TLM-00635	unverified	The FOS shall mark a parameter as being active when it has been successfully decommutated.		08783
	F-TLM-00810	unverified	The FOS shall provide decommutation of a given location of a given packet to be associated with any one of various parameter mnemonics, depending on the value of a discrete telemetry context switch parameter.	The context switch may be either a telemetered or derived discrete parameter.	08783
	F-TLM-00815	unverified	The FOS shall support up to sixteen (16) distinct, predefined ranges for each context switch parameter.	Data base validation will disallow any undefined context switch parameter states. The sixteen context switches will encompass all possible switch parameter values.	08783
	F-TLM-00820	unverified	The FOS shall only decommutate a	If a context switch is poor quality or	08783

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			context-dependent parameter when the context switch is of good quality and has been marked active.	has been marked static, the context-dependent parameter will be marked static.	
	F-TLM-00920	unverified	The FOS shall provide the capability to select an EU conversion algorithm based upon the value of an associated predefined discrete telemetry point.	This capability permits a context switched EU conversion. Up to sixteen (16) predefined switch ranges are available. The discrete may be either a decommutated or derived telemetry parameter.	08783
	F-TLM-01410	unverified	The FOS shall make available the values for every predefined telemetry parameter.		08783
	F-TLM-10810	unverified	FOS shall provide decommutation of a given location of a given major cycle to be associated with any one of various		08783

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			parameter mnemonics, depending on the value of a discrete telemetry context switch parameter.		
TLM-2030B					
	F-TLM-00525	passed	The FOS shall determine the decommutation algorithm for a telemetered CCSDS packet application data field based upon the packet application process identifier (APID).	The FOS supports the processing of engineering data for engineering telemetry downlinked with its own CCSDS packet application identifier.	0
	F-TLM-00530	passed	The FOS shall decommutate telemetry based upon predefined spacecraft and instrument specific decommutation information.	The decommutation information will consist of data necessary for the retrieval and storage of downlinked spacecraft telemetry parameters. This decommutation information will be based on the Project Data Base.	0
	F-TLM-00910	passed	The FOS shall allow one predefined EU		0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			conversion algorithm to be active for each parameter.		
	F-TLM-00935	partially passed	The FOS shall be capable of performing EU conversions using seventh order or lower polynomials with a minimum of two coefficients.	Polynomial conversion will use the following equation:_y = C0 + C1x + C2x**2 + ... C7x**7 where x is the raw value, Ci is a data base defined coefficient, and y is the converted value.	04023, 08683
	F-TLM-00945	failed	The FOS shall be capable of performing EU conversions using linear interpolation with no more than 15 pairs of start and end-points that specify 15 contiguous line segments of increasing value.	Linear interpolation conversion will use the following equation:_y = mx + b where x is the raw value, m is the slope of the given segment, b is the y-axis intercept, and y is the converted value.	09040
	F-TLM-00960	passed	The FOS shall mark accordingly any	For example, conversion errors could	0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			telemetry parameter that results in an error during the EU conversion	occur in the case of overlapping line segment end points. Such errors should be eliminated during telemetry data base validation.	
	F-TLM-00985	passed	The FOS shall allow specification of up to eight (8) different EU segments for each analog parameter.	A separate EU conversion can be specified for each segment.	0
	F-TLM-00990	passed	The FOS shall be capable of performing conversion of segmented EUs.	Segmented EU conversion will use the following equation: y = C0 + C1X = C2X**2 = C3X**3 where X is the decoded value, Ci is a data base defined coefficient, and y is the converted value.	0
	F-TLM-01420	passed	The FOS shall retain the parameter data until replaced by more recent data		0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			and/or system reconfiguration.		
	F-TLM-10955	passed	The FOS shall be capable of performing EU conversions using an exponential function with three coefficients.	Exponential conversion will use the following equation:_y = C0 + C1e(C2x)where x is the raw value, Ci is a data base defined coefficient, e has a value of 2.718, and y is the converted value.	0
TLM-2040B					
	F-RMS-00100	passed	The EOC shall provide multiple EOC operators access to the same data stream.	A data stream is defined as a real-time, replay or simulated telemetry stream.	0
	F-TLM-00915	partially passed	The FOS shall allow for the selection from up to four (4) EU conversion algorithms for each parameter.		08684

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
	F-TLM-00925	partially passed	The FOS shall provide the capability for the user to select a predefined EU conversion algorithm.		08684
	F-TLM-00970	passed	The FOS shall provide the capability for the user to adjust the predefined EU conversion algorithm coefficient values.	Changing of the coefficient values via user directive is temporary. Permanent alterations may be accommodated through changes in the coefficient values resident within the Project Data Base. Whenever a new set of limits is loaded, the data base defined values will be restored.	0
TLM-2050B					
	F-TLM-00635	passed	The FOS shall mark a parameter as being active when it has been successfully decommutated.		0

FOS Requirement Status Matrix

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
	F-TLM-00710	passed	The FOS shall provide for the assembly of parameters from multiple and contiguous bits.		0
	F-TLM-00715	passed	The FOS shall provide for the assembly of parameters from multiple and non-contiguous bits.	The parameter construction information will be based on the Project Data Base and will include the location of data in the downlink telemetry (packet), the parameter start bit, and the number of bits to gather. This and the previous requirement allow for the decommutation of parameters that cross word boundaries.	0
	F-TLM-00720	passed	The FOS shall be capable of extracting a maximum of 8 "components" for any one telemetry parameter.	Each component is considered a contiguous grouping of bits that are capable of being extracted simultaneously. for each parameter,	0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
				FOS will have the ability to extract and assemble from one (1) to eight (8) groups of bits whose total number of bits does not exceed thirty-two (32).	
	F-TLM-00725	passed	The FOS shall provide a mechanism to collect all components before any subsequent processing can be initiated for telemetry parameters with multiple components.	Examples of subsequent processing whoud include limit sensing, EU conversion, etc.	0
	F-TLM-00730	passed	The FOS shall extract all components for a telemetry parameter from the same packet.	The quality of the parameter composite value will be based upon the quality of all components.	0
	F-TLM-00735	passed	The FOS shall be capable of extracting a maximum of 32 bits for any one telemetry parameter.	The exact bit pattern extracted for a given parameter is referred to as the raw value.	0

FOS Requirement Status Matrix

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
TLM-2060B					
	F-TLM-00315	unverified	The FOS shall mark all parameters decommutated from a packet containing an error as having questionable quality.	The FOS performs derived parameter calculations and marks the result as having questionable quality if a data point with questionable quality is required for use in calculating the derived parameter.	08772
	F-TLM-01035	unverified	The FOS shall use high and low limit values in raw or EU counts as specified for decommutated and derived parameters when limits have been defined.	Limits for both decommutated and derived parameters are specified through the Project Data Base.	08772
	F-TLM-01050	unverified	The FOS shall perform limit checking only on good quality data.		08772

FOS Requirement Status Matrix

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
	F-TLM-01235	unverified	The FOS shall allow for adjusting the limit values of any boundary limit group for parameters having multiple boundary limit groups defined.	The telemetry data base values are restored when a new limit group is loaded or upon initialization.	008772
	F-TLM-01310	unverified	The FOS shall evaluate derived parameters based on specified, predefined equations.	The derived parameter algorithms will be obtained from telemetry data base definitions.	08772
	F-TLM-01315	unverified	The FOS shall use analog telemetry values, discrete telemetry values, constants, or other derived parameters to build new derived parameters.	The FOS telemetry data base will limit the number of input parameters for each derived parameter equation to six (6).The maximum number of derived parameters that may be processed at any given time will be determined for each mission.	08772

FOS Requirement Status Matrix

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
	F-TLM-01320	unverified	The FOS shall be capable of using either decoded or converted values when evaluating derived telemetry parameters.	The Telemetry parameter values used as inputs to the derived parameter equation will be specified as either decoded or converted via the telemetry database.	08772
	F-TLM-01325	unverified	The FOS shall support the use of basic arithmetic operators when building the derived parameters. The allowable arithmetic operators shall include: + Addition - Subtraction - Negation * Multiplication / Division SIN Sine ASIN Arcsine COS Cosine ACOS Arccosine TAN Tangent ATAN Arctangent	The arithmetic operators are used to generate numerical results.	08772
	F-TLM-01330	unverified	The FOS shall support the use of basic logical operators when building the derived parameters. The allowable	The logical operators are used to generate Boolean results, where a zero result represents false and all	08772

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			logical operators shall include: = Equal to != Not equal to < Less than <= Less than or equal to > Greater than >= Greater than or equal to AND Logical AND OR Logical OR NOT Logical NOT	other values represent true.	
	F-TLM-01335	unverified	The FOS shall mark a derived parameter as having questionable quality whenever any of the input parameters are marked as questionable.		08772
	F-TLM-01345	unverified	The FOS shall flag the derived parameter as static if any of the input parameters are static.	The FOS will not perform an algorithm when a parameter marked static is required for use in that algorithm, and the previous result shall be marked static.	08772

FOS Requirement Status Matrix

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
	F-TLM-01350	unverified	The FOS shall evaluate derived parameters in the specified order.	The order is based upon the specified re-evaluation (update) rates of the parameters and how the derived parameters were organized within the data base.	08772
	F-TLM-01355	unverified	The FOS shall allow individual derived parameter evaluations to be enabled or disabled.		08772
	F-TLM-01360	unverified	The FOS shall provide the capability to adjust individual derived parameter re-evaluation rates based on a user specified interval.	Derived parameter processing will be invoked after the update interval for that parameter has been modified, and every Nth time interval thereafter, N being the interval in spacecraft clock seconds.	08772
	F-TLM-01365	unverified	The FOS shall support a derived	The evaluation interval will be based on	08772

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			parameter evaluation interval of no less than one (1) spacecraft clock second.	the spacecraft clock time extracted from the telemetry packets. This provides for the consistent evaluation of derived parameters whether they are geing processed at the real-time or some alternate replay rate.	
	F-TLM-01415	unverified	The FOS shall make available the status for every predefined telemetry parameter.		08772
	F-TLM-01425	unverified	The FOS shall make available, on a per-parameter basis, the following: a. last decommutated raw value b. associated converted value (if applicable) c. limit range values (if applicable) d. limit sense interval		08772

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			e. no data available indicator f. static/active indicator g. quality status indicator h. out-of-limits low indicators (if applicable) i. out-of-limits high indicators (if applicable) j. delta limit error indicator k. conversion error indicator		
	F-TLM-11320	unverified	The FOS shall provide the capability to process a maximum of fifty (50) AM-1 derived parameters at a given time.		08772
TLM-2070B					
	F-FUI-07200	passed	The FOS shall provide alphanumeric displays that are capable of displaying		0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			the following: a. the descriptor or mnemonic of a telemetry parameter b. the current state of a discrete telemetry parameter c. the current value of an analog telemetry parameter d. the current state of an analog telemetry parameter based on a range of predefined values e. whether data associated with a telemetry parameter is suspect (bad quality) f. whether data associated with a telemetry parameter is static g. whether an analog telemetry value has violated a range limit h. whether an analog telemetry value		

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			has violated a delta limit i. descriptive labels j. static descriptive text k. horizontal and vertical separator lines l. Universal Time Coordinated (UTC)m. spacecraft time n. current orbit number o. data source (real-time, replay, simulated) p. current major/minor frame counts q. current telemetry format r. current telemetry rate s. spacecraft Id		
	F-FUI-07330	passed	The FOS shall have the capability to capture all occurrences of a parameter between screen updates, and then		0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			display the captured data at the next update.		
	F-FUI-07425	passed	The FOS shall provide the user with the capability to capture all occurrences of a telemetry value between screen updates, and then display the captured data at the next screen update.		0
	F-RMS-00110	passed	The EOC shall provide a single EOC operator access to multiple data streams.	The number of streams a single operator is allowed to access at one time will not be restricted by the RMS software.	0
	F-TLM-00310	passed	The FOS shall base the quality of a packet on the quality indicator received in the EDU header.	EDOS discards packets containing errors which are not correctable via the Reed-Solomon error detection and correction algorithm. The FOS will	0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
				process all packets which are	
	F-TLM-00315	passed	The FOS shall mark all parameters decommutated from a packet containing an error as having questionable quality.	The FOS performs derived parameter calculations and marks the result as having questionable quality if a data point with questionable quality is required for use in calculating the derived parameter.	0
TLM-2080B					
	F-FUI-07200	passed	The FOS shall provide alphanumeric displays that are capable of displaying the following: a. the descriptor or mnemonic of a telemetry parameter b. the current state of a discrete telemetry parameter c. the current value of an analog		

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			telemetry parameter d. the current state of an analog telemetry parameter based on a range of predefined values e. whether data associated with a telemetry parameter is suspect (bad quality) f. whether data associated with a telemetry parameter is static g. whether an analog telemetry value has violated a range limit h. whether an analog telemetry value has violated a delta limit i. descriptive labels j. static descriptive text k. horizontal and vertical separator lines l. Universal Time Coordinated (UTC)m.		

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			spacecraft time n. current orbit number o. data source (real-time, replay, simulated) p. current major/minor frame counts q. current telemetry format r. current telemetry rate s. spacecraft Id		
	F-TLM-01010	passed	The FOS shall perform high/low limit checking on parameters when limits have been defined.		0
	F-TLM-01015	passed	The FOS shall have the capability to limit check parameters for red high, red low, yellow high, and yellow low boundary violations.		0

FOS Requirement Status Matrix

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
	F-TLM-01020	failed	The FOS shall allow for the selection of a single boundary limit group from a limit set containing up to four groups of boundary limits per parameter.	Each boundary limit group is capable of accommodating red and yellow high/low limit values.	08748
	F-TLM-01025	failed	The FOS shall provide the capability to select a boundary limit group based upon the value of an associated predefined discrete telemetry parameter.	This capability permits a context switched boundary group selection. Up to sixteen (16) predevined switch ranges are available. The discrete may be either a decommutated or derived telemetry parameter.	08748
	F-TLM-01030	failed	The FOS shall provide the capability for the user to select a predefined boundary limit group.		08748
	F-TLM-01035	partially passed	The FOS shall use high and low limit values in raw or EU counts as	Limits for both decommutated and derived parameters are specified	09048

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			specified for decommutated and derived parameters when limits have been defined.	through the Project Data Base.	
	F-TLM-01040	passed	The FOS shall limit check telemetry data against its associated limit values for every occurrence of the parameter.		0
	F-TLM-01050	passed	The FOS shall perform limit checking only on good quality data.		0
	F-TLM-01055	passed	The FOS shall mark each telemetry parameter indicating the current limit condition.	Each parameter will have flags indicating whether any limit violations have occured. These flags include high/low (if applicable) and delta limit violations.	0

FOS Requirement Status Matrix

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
	F-TLM-01110	passed	The FOS shall notify the user when a parameter violates high/low limits.		0
	F-TLM-01115	passed	The FOS shall notify the user when a parameter returns to within high/low limits.		0
	F-TLM-01125	passed	The FOS limit notification shall contain the current packet spacecraft time stamp, telemetry mnemonic, parameter value, limit condition, and assigned limit values.	Every notification (event) message is tagged with a ground time stamp. Additionally, each limit notification message will include the spacecraft time stamp within the message text field.	0
	F-TLM-01130	passed	The FOS limit notification shall be reported when a telemetry point exceeds a limit, when the point comes		0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			back in limits, and every Nth occurrence (based upon the limit sense interval).		
	F-TLM-01135	passed	The FOS shall generate a notification without an alarm for limit violations in the yellow range.		0
	F-TLM-01140	passed	The FOS shall generate a notification with an alarm for limit violations in the red range.	An alarm reflects the severity of the violation and may trigger an audible indicator, the display of high-lighted text, etc.	0
	F-TLM-01145	failed	The FOS shall be capable of reporting limit violations based upon a predefined limit sense interval for each normal and derived parameter that has defined limits.	The limit sense interval modifies only the notification reporting rate and has no affect on limit checking and indicator updates. The FOS will use the predefined limit interval values as the	08751

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
				initial default limit notification period.	
	F-TLM-01150	failed	The FOS shall provide notification of any out-of-limits status every Nth sample occurrence, where N is defined as the limit sense interval for that parameter.		08751
	F-TLM-01155	passed	The FOS shall provide the capability of disabling (suppressing) or enabling notification messages concerning limits for all parameters.	Although the display of notification messages may be suppressed, the messages will continue to be stored or logged. The FOSdefault limit condition reporting mode will be 'enabled'.	0
	F-TLM-01160	partially passed	The FOS shall provide the capability of disabling or enabling notification messages concerning limits at the parameter level.		08750

FOS Requirement Status Matrix

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
	F-TLM-01165	passed	The FOS shall provide the capability of disabling or enabling notification messages concerning limits at the spacecraft subsystem/instrument level.		0
	F-TLM-01210	failed	The FOS shall provide the user the capability of changing limit values, delta limit values, and limit sense intervals.	Changing of the limit values via user directive is temporary. Permanent alterations may be accommodated through changes in the limit values resident within the Project Data Base. Whenever a new set of limits is loaded, the data base defined limits and sense intervals will be restored.	08746
	F-TLM-01220	passed	The FOS shall allow adjustment of limit values only for those telemetry parameters that have predefined limit values.		0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
	F-TLM-01225	failed	The FOS shall be able to modify boundary limit values, delta limit values, and limit sense intervals at the parameter level.		08751
	F-TLM-01230	failed	The FOS shall provide the capability to specify limit adjustments in raw counts or engineering units.		08746
TLM-2090B					
	F-FUI-07200	passed	The FOS shall provide alphanumeric displays that are capable of displaying the following: a. the descriptor or mnemonic of a telemetry parameter b. the current state of a discrete telemetry parameter		0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			c. the current value of an analog telemetry parameter		
			d. the current state of an analog telemetry parameter based on a range of predefined values		
			e. whether data associated with a telemetry parameter is suspect (bad quality)		
			f. whether data associated with a telemetry parameter is static		
			g. whether an analog telemetry value has violated a range limit		
			h. whether an analog telemetry value has violated a delta limit		
			i. descriptive labels		
			j. static descriptive text		
			k. horizontal and vertical separator lines		

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			l. Universal Time Coordinated (UTC)m. spacecraft time n. current orbit number o. data source (real-time, replay, simulated) p. current major/minor frame counts q. current telemetry format r. current telemetry rate s. spacecraft Id		
	F-TLM-01045	passed	The FOS shall compare the change of successive raw parameter values with the predefined delta value.	Delta limits are specified through the Project Data Base.	0
	F-TLM-01050	passed	The FOS shall perform limit checking only on good quality data.		0

FOS Requirement Status Matrix

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
	F-TLM-01055	partially passed	The FOS shall mark each telemetry parameter indicating the current limit condition.	Each parameter will have flags indicating whether any limit violations have occured. These flags include high/low (if applicable) and delta limit violations.	05949
	F-TLM-01120	passed	The FOS shall notify the user when a parameter incurs a delta limit violation.		0
	F-TLM-01130	failed	The FOS limit notification shall be reported when a telemetry point exceeds a limit, when the point comes back in limits, and every Nth occurrence (based upon the limit sense interval).		08681
	F-TLM-01145	failed	The FOS shall be capable of reporting	The limit sense interval modifies only	08681

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			limit violations based upon a predefined limit sense interval for each normal and derived parameter that has defined limits.	the notification reporting rate and has no affect on limit checking and indicator updates. The FOS will use the predefined limit interval values as the initial default limit notification period.	
	F-TLM-01150	failed	The FOS shall provide notification of any out-of-limits status every Nth sample occurrence, where N is defined as the limit sense interval for that parameter.		08681
	F-TLM-01165	passed	The FOS shall provide the capability of disabling or enabling notification messages concerning limits at the spacecraft subsystem/instrument level.		0
	F-TLM-01225	partially passed	The FOS shall be able to modify		08341

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			boundary limit values, delta limit values, and limit sense intervals at the parameter level.		
TLM-2100B					
	F-FUI-07200	unverified	The FOS shall provide alphanumeric displays that are capable of displaying the following: a. the descriptor or mnemonic of a telemetry parameter b. the current state of a discrete telemetry parameter c. the current value of an analog telemetry parameter d. the current state of an analog telemetry parameter based on a range of predefined values e. whether data associated with a telemetry parameter is suspect (bad		0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			quality) f. whether data associated with a telemetry parameter is static g. whether an analog telemetry value has violated a range limit h. whether an analog telemetry value has violated a delta limit i. descriptive labels j. static descriptive text k. horizontal and vertical separator lines l. Universal Time Coordinated (UTC)m. spacecraft time n. current orbit number o. data source (real-time, replay, simulated) p. current major/minor frame counts q. current telemetry format		

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			r. current telemetry rate s. spacecraft Id		
	F-FUI-07600	unverified	The FOS shall display the following PDB information about discrete and analog telemetry parameters: a. the descriptor b. the mnemonic c. the valid states of a discrete telemetry value d. the conversion polynomial of an analog telemetry value e. the delta limits for a telemetry value f. the high and low, red and yellow limits for a telemetry value g. the cycles from which the telemetry value is extracted h. the telemetry values on which a		0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			derived telemetry value is based i. parameter Id j. spacecraft Id		
	F-FUI-07605	unverified	The FOS shall provide the user with the capability to display up to 50 telemetry parameters and their associated data in an Info window.		0
	F-FUI-07700	unverified	The FOS shall provide a status window that displays: a. Universal Time Coordinated (UTC) b. spacecraft time c. count down clock d. current orbit number e. data source (real-time, replay, simulated) f. cycle count		0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			g. current telemetry format h. current telemetry rate i. spacecraft identifier		
	F-FUI-07710	unverified	The FOS shall provide a count down clock. The count down clock will first count down to the acquisition of signal time (AOS). After AOS, it will count down to the loss of signal time (LOS).		0
	F-FUI-17600	unverified	The FOS shall display data base information about the master and major cycles that the telemetry value is extracted from.		0
	F-TLM-01215	unverified	The FOS shall provide the user the capability to access current limit values and delta limit values in both raw and	Where conversions from engineering units to raw results in a non-unique value, the value will be disallowed and	0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			engineering units.	discarded.	
TLM-2150B					
	F-TLM-00445	passed	The FOS shall generate a notification message whenever a missing packet is detected.	Each missing packet notification message will contain the detection time (UTC) and the total number of packets recognized as being missed.	0
	F-TLM-00620	passed	The FOS shall mark all parameters as static upon data dropout (i.e., no telemetry has been received for 5 seconds).	The default dropout detection period will be data base defined.	0
	F-TLM-00625	passed	The FOS shall mark a parameter static if the given parameter has not been updated for more than a spacecraft major frame.	For example, the AM-1 major frame (master cycle) is repeated approximately every 64 seconds. The FOS will discontinue further parameter processing (e.g., limit checking) when the parameter has been marked static.	0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
	F-TLM-10445	passed	The FOS shall generate a notification message whenever a missing AM-1 major cycle is detected.	Each missing major cycle notification message will contain the detection time (UTC) and the total number of major cycles recognized as being missed.	0
TLM-2160B					
	F-DMS-00710	passed	The EOC shall archive all telemetry data.		0
	F-DMS-00720	passed	The EOC shall maintain the telemetry data on-line for a minimum of 7 days.		0
	F-DMS-00730	passed	The EOC shall archive telemetry in chronological order.		0

FOS Requirement Status Matrix

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
	F-DMS-00810	passed	The EOC shall archive all ground-telemetry data.		0
	F-DMS-00820	passed	The EOC shall maintain the ground-telemetry data on-line for a minimum of 7 days.		0
	F-DMS-00830	passed	The EOC shall archive ground-telemetry in chronological		0
	F-TLM-00115	passed	The EOC shall be capable of receiving EOS spacecraft simulator telemetry.	The spacecraft simulator data may originate at the spacecraft contractor facility, spacecraft software development facility, or EOC.	0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
	F-TLM-00120	passed	The EOC shall be capable of receiving historical EOS spacecraft and instrument telemetry.	Historical telemetry data is nominally stored in the EOC short term archive for seven (7) days. Data older that seven (7) days can be retrieved from the GSFC DAAC.	0
	F-TLM-01510	passed	The EOC shall store telemetry data as received from EDOS.	Telemetry data is received from EDOS in the form of EDUs containing spacecraft and instrument CCSDS telemetry packets.	0
	F-TLM-01545	passed	The EOC shall provide the capability to enable and disable the storage of housekeeping and instrument engineering telemetry.		0
	F-TLM-11515	passed	The EOC shall be capable of receiving and storing AM-1 real-time housekeeping telemetry at rates up to		0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			16 Kbps.		
TLM-2170B					
	F-DMS-00610	passed	The EOC shall provide for operational use of the telemetry PDB definitions.		0
	F-FOS-00310	passed	The EOC shall receive simulated spacecraft and instrument telemetry from the EOS spacecraft simulators.	Reference the Interface Control Document between the EOC and Spacecraft Simulator for specifics pertaining to this interface.	0
	F-FOS-00350	passed	The EOC shall receive telemetry data from EDOS, including real-time and rate-buffered housekeeping and engineering data from EOS instruments and spacecraft.	Reference the Interface Control Document between the EOC and EDOS for specifics pertaining to this interface.	0
	F-TLM-10125	passed	The EOC shall be capable of receiving	For example, the EOC will be able to	0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			AM-1 housekeeping and AM-1 diagnostic telemetry data from both the I-channel and Q-channel simultaneously.	accept telemetry with the I and Q channels in the following configurations: 2 - 16 kbps housekeeping or 1 -16 kbps housekeeping and 1 - 16 kbps diagnostic	
	F-TLM-10130	passed	The EOC shall be capable of receiving the 1 kbps AM-1 health and safety telemetry data from both the TDRSS S-band and launch vehicle simultaneously.	This requirement assumes that AM-1 provides the capability of differentiating between the two health and safety streams.	0
TLM-2190B					
	F-DMS-00780	passed	The FOS shall provide the capability to replay archived telemetry at user selectable rates.		0

FOS Requirement Status Matrix

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
	F-FUI-02300	passed	The FOS shall provide the user the capability to select a time range for the replay data to play, including: a. start time b. stop time c. begin time	Replay data includes telemetry, NCC UPD Messages, and EDOS CODA Reports.	0
	F-FUI-02305	passed	The FOS shall provide the user the capability to select the replay rate.		0
	F-FUI-02310	passed	The FOS shall provide the means of stepping forward through the replay data by specifying the amount of time in seconds.	Replay data includes telemetry, NCC UPD Messages, and EDOS CODA Reports.	0
	F-FUI-02315	passed	The FOS shall allow the user to pause the replay data sequence.	Replay data includes telemetry, NCC UPD Messages, and EDOS CODA	0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
				Reports.	
	F-FUI-02320	passed	The FOS shall allow the user to resume the paused replay data sequence.	Replay data includes telemetry, NCC UPD Messages, and EDOS CODA Reports.	0
	F-FUI-02325	passed	The FOS shall provide the user the capability to reset the begin time when the replay is in pause mode.		0
	F-FUI-02330	partially passed	The FOS shall provide a visual indication of the location of the replay data. This display will include: a. start time b. stop time c. position of current time		08682

FOS Requirement Status Matrix

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
	F-FUI-02335	passed	The FOS shall provide the user a reset capability that will reset the replay time to the last established begin time.		0
	F-FUI-07330	passed	The FOS shall have the capability to capture all occurrences of a parameter between screen updates, and then display the captured data at the next update.		0
	F-FUI-07425	passed	The FOS shall provide the user with the capability to capture all occurrences of a telemetry value between screen updates, and then display the captured data at the next screen update.		0
	F-FUI-08100	passed	The FOS shall provide a user the	A resource service request will	0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			capability to submit a resource service request.	contain the parameters needed by the Resource Management Subsystem to establish a logical string. These parameters include: _a. spacecraft Id _b. data base Id _c. service type (real-time, replay, simulation) _d. mode (operational, training, test)	
	F-FUI-12310	passed	The FOS shall allow a user to select a replay rate from 1 kilobit per second up to 150 kilobits per second.		0
	F-RMS-00035	passed	The EOC shall allow EOC operators to specify a version of the project data base to use in processing data.	For real-time data, the default will be the current project data base, and for historical data the default will be the project data base from the	0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
				corresponding timeframe.	
	F-RMS-00080	passed	The EOC shall provide an EOC operator access to replay data.	Replay data consists of both real-time and spacecraft recorder data currently archived in the ECS.	0
	F-TLM-01610	passed	The FOS shall replay telemetry data based upon a user specified time period.		0
	F-TLM-01625	passed	The FOS shall process all telemetry packets for the requested period, during the replay operation.		0
	F-TLM-01630	passed	The FOS shall be capable of processing stored housekeeping and engineering telemetry for analysis at	This requirement is derived from the fact that the FOS must be able to analyze twenty-four (24) hours of	0

Test Case ID	Level 4	Status	Text	Clarification	NCR ID
			twelve (12) times the real-time rate.	stored telemetry data within two (2) hours. This capability is used for off-line batch processing and when the immediate display of information is not necessary or desired (i.e. gathering statistics on a particular parameter over several weeks of stored telemetry data).	
	F-TLM-01635	passed	The FOS shall be capable of processing stored housekeeping and engineering telemetry for display at rates up 150 Kbps.	This requirement permits the repid replay and display of stored telemetry, and may be useful during contact simulations.	0
	F-TLM-01640	passed	The FOS shall be able to replay and process the telemetry data at the real-time or at a user specified rate.		0